297mm x 420mm A3, A4 Scale 100%, fold to 99mm x 140mm 25 August, 2009 63976_47115_Leaflet_V1

CAUTION

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Freezone
Glyphosate 680
TUFFWEED
Granular Concentrate Herbicide

ACTIVE CONSTITUENT: 680 g/kg GLYPHOSATE present as the monoammonium salt

GROUP M HERBICIDE

For the control of a wide spectrum of annual, perennial and woody weeds in a variety of situations including home and garden, commercial and industrial areas and agricultural situations as per the Directions for Use table

IMPORTANT: READ THIS LEAFLET BEFORE OPENING OR USING
APVMA Approval No: 63336/0809

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PRODUCT INFORMATION
Freezone Glyphosate 680 Tuffweed Granular Concentrate Herbicice is a non-volatile, water volumes soluble product with non-selective herbicidal activity against many annual and perennial broadleaf weeds and grasses. GLYPHOSATE 680 TUFFWEED may be used for weed control on agricultural land prior to planting any edible or non edible crop but not prior to transplanting tomatoes. GLYPHOSATE 680 TUFFWEED is absorbed by plant foliage and green stems. It is inactivated immediately in the soil and does not provide residual weed control. GLYPHOSATE 680 TUFFWEED moves throughout the plant from the point of contact to and into the root system.
Visible effects on annual weeds take 3-7 days but on perennial weeds may not be obvious for 2-3 weeks or longer in some cases. Visible effects of control may be delayed by cool or cloudy weather at and following treatment.
GLYPHOSATE 680 TUFFWEED will control emerged weeds only, and provides no residual weed control. Apply treatments to weed which have at least one true leaf (broadleaf weeds) or two leaves (grasses) to provide an adequate surface area for herbicide uptake.

RESISTANT WEEDS WARNING GROUP M HERBICIDE

FREEZONE GLYPHOSATE 680 TUFFWEED GRANULAR CONCENTRATE HERBICIDE is a member of the Glycines group of herbicides. GLYPHOSATE 680 TUFFWEED has the inhibitors of EPSP synthase mode of action. For weed resistance management GLYPHOSATE 680 TUFFWEED is a Group M herbicide. Some naturally occurring weed biotypes resistant to GLYPHOSATE 680 TUFFWEED and other Group M herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by GLYPHOSATE 680 TUFFWEED or other Group M herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Freezone Public Health Pty Ltd accepts no liability for any losses that may result from the failure of GLYPHOSATE 680 TUFFWEED to control resistant weeds.

CROP ESTABLISHMENT
FREEZONE GLYPHOSATE 680 TUFFWEED HERBICIDE is recommended for control of emerged weeds prior to crop establishment. Suitable cultivation and/or sowing operations are required to provide seedbed conditions satisfactory for crop germination and development. Spraying early to control young weeds will favour preparation of suitable seedbeds.
On friable soils and where there is only light cover of young weeds, sowing may proceed satisfactory from one day after spraying. In situations of heavy weed growth, sowing should be delayed until weed decay and soil conditions allow formation of a satisfactory seedbed. Incorporation of green or decaying vegetation and roots into the seedbed by cultivation or sowing may cause retarded crop emergence, particularly in cold and/or wet conditions. Vegetation may be reduced by grazing and weed decay may be assisted by cultivation to leave trash on the surface. In marginal seedbed conditions, take care to achieve correct seeding depth and avoid use of pre-emergence herbicides where label directions advise risk of retarded crop emergence.

MIXING
For boom application, water volume should not be less than 6 litres per 1kg of GLYPHOSATE 680 TUFFWEED. Reduced results may occur if water containing soil is used,eg. water from ponds and unlined ditches, or if hard water containing calcium salts is used. Do not mix, store or apply this product or spray solutions of this product in galvanized steel or unlined steel containers or spray tanks, since a highly flammable gas mixture may be formed. Use stainless steel, aluminium, brass, copper, fibreglass, plastic or plastic lined containers or spray tanks. Spray tanks, pumps, lines and nozzles should be thoroughly cleaned with clean water following application to prevent corrosion. Ensure the spray tank is free of any residue of previous spray materials. Use spray solutions promptly and certainly within 5 days, since gradual loss of activity will occur. Good agitation is required particularly under cold conditions, to ensure all of the GLYPHOSATE 680 TUFFWEED dissolves when first added to the tank.
Full Agitation In Pre-Filled Spray Tank
- Fill the tank with one-half the required amount of clean water and set the pump on full agitation.
-Add the required amount of GLYPHOSATE 680 TUFFWEED slowly to ensure that it is well dispersed throughout the tank and none collects on the bottom. Suggested rate is 10kg in 2-3 minutes.
- Continue water addition and fully agitate until all the GLYPHOSATE 680 TUFFWEED is completely dissolved.

SURFACTANT ADDITION
Additional surfactant is not required except where the rate of
GLYPHOSATE 680 TUFFWEED is less than 6g/L when applied by boom.
Rate: Add Turbo® Plus at 100mL per 100L water. Results with other surfactants may be variable. Do not mix with spraying oils, agricultural chemicals or other materials except as directed on the label.

TANK MIXTURES
FREEZONE GLYPHOSATE 680 TUFFWEED HERBICIDE, may be tank-mixed with the following herbicides, insecticides and additives. Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank-mix products.
Mixing Instructions For All Tank Mixtures:
Fill the spray tank 1/3 to 1/2 full with clean water and start agitation. Add FREEZONE GLYPHOSATE 680 TUFFWEED HERBICIDE. Mix thoroughly and continue water addition. Where crystalline ammonium sulphate is recommended, wash 2%w/v (2kg/100L spray solution) through a top mesh-screen into the tank and mix thoroughly. Add recommended herbicide/insecticide/additive to the spray tank and mix thoroughly.
Add surfactant near the end of the filling process to minimize foaming. Always maintain adequate agitation during application and use the tank mix promptly.

Tank Mixtures – Herbicides
Atrazine* flowable or granular (Agricultural uses only. Do not apply the tank-mix for control of Barnyard grass or liverseed grass), 2,4-D ester, dicamba, Express®, Triclopyr 600, Ken-Chlor 750, simazine* flowable or granular, Oust®, Yield®, Pendi 330, Tillmaster® CT, Ken-Met 600, Ken-Gran 750 WG, Ken-Trel, Flanfor® 500, LV MCPA and Oxyfluorfen.
*Ammonium sulfate may improve the performance of tank mixtures of FREEZONE GLYPHOSATE 680 TUFFWEED HERBICIDE and atrazine or simazine. See directions below.
The addition of Oxyfluorfen at 75mL/ha to recommended rates of FREEZONE GLYPHOSATE 680 TUFFWEED HERBICIDE prior to planting wheat or barley will improve knockdown and increase the speed at which treated weeds develop visible symptoms of phytotoxicity.

Tank Mixtures – Additives
Ammonium sulphate (crystalline or liquid 500g/L)
Rate: 2L or 1 kg/100L spray solution.
The addition of crystalline ammonium sulphate to FREEZONE GLYPHOSATE 680 TUFFWEED, when used to control annual weeds MAY improve the performance of FREEZONE GLYPHOSATE 680 TUFFWEED HERBICIDE under adverse environmental conditions such as cool, cloudy weather. Ammonium sulfate may also improve the performance of tank mixtures of FREEZONE GLYPHOSATE 680 TUFFWEED and atrazine or simazine. Use only crystalline or liquid (500g/L) ammonium sulfate, NOT prilled or granular forms. Ammonium sulfate may be corrosive to metal parts of the sprayer. Thoroughly flush tanks, pumps and nozzles with water after use.

Pulse® Penetrant
Rate: 20mL/10L spray solution
Add when treating bracken (boom application) Wetter TX® Surfactant
Rate: 20mL/10L spray solution.
Add when treating Annual ryegrass in spring (from the beginning of August to the end of October), Silvergrass and perennial grasses – see critical comments section. Wetter TX® is not a general purpose surfactant and should be used only where recommended.

Tank Mixtures – Insecticides
This product is compatible with the following insecticides. Dimethoate, Imidan, Le-Mat®, Kensban 500, Metasystox®, Perfekthion® EC 400, Sumithion® ULV and emulsifiable concentrates of dimethoate and fenitrothion. Other insecticides have not been tested.

APPLICATION
FREEZONE GLYPHOSATE 680 TUFFWEED HERBICIDEis a non-selective translocated herbicide. Direct spray contact, or even slight drift, may cause severe injury or destruction of any growing crop or other desirable plants including trees. Clean all equipment after use by thoroughly washing with water.

Boom Equipment
For broadacre application, a spray volume of 60L/ha or less is recommended for optimum performance. Fan nozzoles equipment is recommended using pressures in the range 240-280kPa. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

High Volume Application
(e.g. Knapsack/Handgun Equipment) The dilution rate is given as g/litre e.g.: 5 grams GLYPHOSATE 680 TUFFWEED per 1 litre of water. This is equal to 75g GLYPHOSATE 680 TUFFWEED per 15 litres of water or 500g per 100 litres of water. Adjust equipment to achieve an even spray pattern. Apply to ensure complete and uniform wetting of all foliage. For handgun equipment, a D6 spray tip (Spraying Systems Australia P/L) or equivalent and an operating pressure of 400-700kPa are recommended.

Aerial Equipment
Aerial equipment may be used to apply GLYPHOSATE 680 TUFFWEED only in pasture or fallow situations prior to establishment of field crops, fodder crops or new pastures and for pre-harvest application to sorghum and cotton crops. DO NOT use in intensive horticultural cropping areas. Use recommended rates of GLYPHOSATE 680 TUFFWEED HERBICIDE specified in this label up to a maximum limit of 2.1kg/ha.
For Micronair and boom equipment, apply in a minimum spray volume of at least 20L/ha. Droplets with an average size (VMD) of 250-350 micron diameter are recommended. Swath width should be 15-17m. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove herbicide residues.

Application on hilly terrain
As spraying height may vary, to maximize target contact, increase water volume to 30-80L/ha and increase droplet size to at least 300 micron VMD.

Application under summer conditions
High temperatures and/or low relative humidity cause excessive evaporation of spray droplets which may reduce results. When ambient temperature reaches 25 °C, increase water volume to at least 30L/ha and increase droplet size to at least 300 micron VMD. DO NOT apply GLYPHOSATE 680 TUFFWEED by aircraft when ambient temperature is above 30°C.

AVOID DRIFT
DO NOT use with spraying equipment or under meteorological conditions which could be expected to cause spray drift onto nearby susceptible plants, adjacent crops, crop lands or pastures. Equipment settings which produce fine droplets (150 micron or less), winds over 8km/h, inversion conditions, still air and hot dry days all contribute to drift.

PROTECTION OF CROP, NATIVE AND OTHER NON-TARGET PLANTS
Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, since severe injury or destruction may result. DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

PROTECTION OF WILDLIFE, FISH CRUSTACEANS AND ENVIRONMENT
DO NOT contaminate dams, rivers or streams with the product or used container. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water.

STORAGE AND DISPOSAL
Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point.If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.
For refillable containers: [normal text]Empty contents fully into application equipment. Close all valves and return to (point of supply/ designated collection point/ other specific collection details) for refill or storage.

SAFETY DIRECTIONS
Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. When preparing product for use wear elbow-length PVC gloves and face shield or goggles. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each days use wash gloves, face shield or goggles and contaminated clothing.

FIRST AID
If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

MATERIAL SAFETY DATA SHEET
Additional information is listed in the Material Safety Data Sheet available on our website www.freezone.net.au.

LIMITATION OF LIABILITY:
Freezone Public Health Pty Ltd will not accept responsibility whatsoever and howsoever arising and whether for consequential loss or risk to persons or property or otherwise in connection with the supply or use of this product other than responsibility for the merchantable quality of the product. The responsibility of Freezone Public Health Pty Ltd is limited to the replacement of the product or (at the option of Freezone Public Health Pty Ltd) the refund of the price paid and is conditional upon a claim being made in writing and where possible sufficient part of the product to enable proper examination being returned to Freezone Public Health Pty Ltd within thirty days of delivery. Except for such replacement, this product is sold without warranty or liability even tough defect, damage, or loss is caused by negligence or other fault.

DIRECTIONS FOR USE
For specific rates of application and complete directions for use, read this label booklet.
APPLICATION CHECK LIST
- Do not treat weeds under poor or dormant growing conditions (such as occur in drought, waterlogging, disease, insect damage or following frosts) as reduced weed control may result. Reduced efficacy may also occur when treating weeds heavily covered with dust or silt.
- Do not add additional surfactant or mix with any other agricultural chemicals, herbicides, oils or other materials except as specifically directed on this label.
- GLYPHOSATE 680 TUFFWEED is absorbed by plant foliage and green stems. Rainfall soon after application may wash the herbicide off the weeds, particularly if the weeds are not actively growing, under stress or conditions of low light intensity or darkness.
- Delay treatment of plants wet with dew or rain if water droplets run off when plants are disturbed.
- Do not disturb treated weeds by cultivation, sowing or grazing for one day after treatment of annual weeds and 7 days for perennial weeds to ensure herbicide absorption except where noted.
- A withholding period for grazing stock is not required. However, it is recommended that grazing of treated plants be delayed (as recommended above) to ensure herbicide absorption. Certain plants such as Soursob, St John's Wort and Bracken, may be naturally toxic to stock. Where known toxic plants are present, grazing should be delayed until complete browning of treated plants has occurred.

General Weed Control

SITUATION	CRITICAL COMMENTS
For general weed control in Domestic areas (Home garden), Commercial, Industrial and Public Service areas, Agricultural buildings and other farm situations. For specific weeds refer to the appropriate Weeds Controlled table.	For the control of many grasses and broadleaf weeds, bamboo, brush and woody weeds. Rate 5 g/L water Refer to the appropriate tables in the attached leaflet for information on application rates and timing ie. seasonal conditions and specific growth stages of specific weeds, bamboo, brush and woody weeds. Apply when weeds are actively growing. Apply to ensure complete and uniform wetting of foliage. Visible symptoms may take from 3-7 days to develop.

USE SITUATIONS ALL STATES (except where noted)
For rates of application and weeds controlled, see Weeds Controlled tables.

SITUATION	CRITICAL COMMENTS
NON-AGRICULTURAL AREAS Around buildings, Commercial and industrial areas, Domestic and Public Service areas, Right-of ways	GLYPHOSATE 680 TUFFWEED does not provide residual weed control. For residual control of annual weeds, GLYPHOSATE 680 TUFFWEED may be tank mixed with certain residual herbicides. See **Tank Mixtures/Herbicides**.
AGRICULTURAL AREAS	GLYPHOSATE 680 TUFFWEED may be used for control of annual and perennial weeds as directed, in agricultural land prior to sowing of any edible or non-edible crop, but not prior to transplanting tomato seedlings.
DRY DRAINS AND CHANNELS (ETC)	DO NOT apply to weeds growing in over water. DO NOT spray across open bodies of water, and do not allow spray to enter water. DO NOT allow water to return to dry channels and drains within 4 days of application.
FORESTS	GLYPHOSATE 680 TUFFWEED may be used prior to establishment of nurseries, for site preparation prior to planting and amongst established trees using a directed or shielded spray. DO NOT allow spray or spray drift to contact foliage or green bark of desirable trees, since severe injury may result.
COTTON Shielded sprayers, Qld & NSW only	SHIELDED SPRAYERS Apply GLYPHOSATE 680 TUFFWEED to weeds growing between crop rows using a shielded sprayer. Refer to the Weeds Controlled tables for rates of application. DO NOT apply in crops less than 20cm high. DO NOT allow spray or spray drift to contact any part of the cotton plant as severe injury or destruction may result.
TREE AND VINES CROPS Avocado, Banana, Blueberries, Citrus fruit, Custard apples, Duboisia, Figs – dessert, Guava, Kiwifruit, Litchi, Mango, Monstera – fruit, Nuts (including Almond, Pecan, Macadamia, Pistachio and Walnut), Olives, Pawpaw, Persimmons, Pome fruit, Raspberries, Stone fruit, Tea, Vineyards	Apply as a directed or shielded spray. DO NOT apply as a spray near trees or vines less than 3 years old unless they are effectively shielded from spray and spray drift. **Citrus fruit, Nuts, Olives, Pome fruit & Vineyards.** DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds, foliage or fruits. **Tea**. Apply a maximum of 2 kg/ha by shielded boom or directed off-centre nozzle or 3 g/litre by directed handgun or knapsack to avoid application to the crop. **All other crops**. DO NOT allow spray drift to contact any part of the plant including the trunk. **CAUTION** where split bark on Kiwifruit and green stems on Pawpaw occur, extreme care is required. For residual control of annual weeds, GLYPHOSATE 680 TUFFWEED may be tank mixed with compatible herbicides which are labelled for use in the above crops. See **Tank Mixtures/Herbicides** for directions.
PASTURE	**DIRECTED (SPOT) APPLICATION**: GLYPHOSATE 680 TUFFWEED is non-selective and may damage or kill any plant in the sprayed area. Re-treatment and/or pasture improvement may be necessary to restrict seedling re-establishment. **BOOM APPLICATION**: GLYPHOSATE 680 TUFFWEED may be used to suppress or kill existing pasture species prior to re-seeding or establishment of other crops. Where spot application is undertaken, grazing stock need not be removed. **CAUTION** Certain plants may be naturally toxic to stock. Where known toxic plants are present. DO NOT allow stock to graze until complete browning of treated plants has occurred.
ONIONS Post-plant, pre-emergence application TAS only	For control of annual weeds and suppression of perennial weeds, including Rope Twitch, apply GLYPHOSATE 680 TUFFWEED at 530g – 1.6kg/ha post-sowing and at least 7 days before crop is due to emerge. DO NOT apply to emerging onion plants as severe injury will result. Use the lower rate on small, actively growing annual weeds. Increase to the higher rate for larger annual weeds (over 15cm tall) and for suppression of perennial weeds.

WEEDS CONTROLLED

STATE REGISTRATION CODE
A- Queensland
B- New South Wales
C- Victoria
D- Tasmania
E- South Australia
F- Western Australia

ANNUAL WEEDS Registration in all states/territories unless otherwise specified

WEEDS CONTROLLED	HANDGUN/KNAPSACK	Boom Rate/ha	CRITICAL COMMENTS
Annual ryegrass Amaranth Barley grass Barnyard grass Bent grass[CD] Brome grass Caltrop Canary grass Capeweed Cereals Chickweed Cobbler's peg Deadnettle Doublegee Fumitory Ground cherry Hedge mustard Hoary cress[BCD] Lesser Swinecress Liverseed grass Mintweed Noogoora burr[AB] Paradoxa grass Paterson's Curse Pigweed Potato weed Saffron thistle Silvergrass Sowthistle Spear thistle Spiny burrgrass Spurge Thornapple Wild oats Wild turnip Winter grass Variegated thistle	3-5 g/litre	1-1.6 kg	Apply to weeds whenever they are not subject to stress due to drought or frost. Use higher rate on weeds over 15cm in height or diameter or where dense weed cover limits spray coverage. Use higher spot spraying rate when applying less than 5L spray per 100 sq. m. GLYPHOSATE 680 TUFFWEED does not provide residual weed control. Repeat treatments may be necessary to control later germinating weeds. For residual control of annual weeds GLYPHOSATE 680 TUFFWEED may be tankmixed with certain residual herbicides. See Tank Mixtures in the General Instructions for directions.

PERENNIAL WEEDS Registration in all states/territories unless otherwise specified.

WEEDS CONTROLLED	HANDGUN/ KNAPSACK	Boom Rate/ha	CRITICAL COMMENTS
Artichoke thistle[CE] African Lovegrass[BCF] Carpet grass Cocksfoot Flatweed Johnson grass Kikuyu Nutgrass Paspalum Phalaris[BCE] Plantain Prairie grass Rhodes grass Rope twitch[CD] *Tall sedge[BCD] Yorkshire fog	5 g/litre	1.5-3 kg	Control of established perennials is best obtained when plants are at the seedhead stage. (Early flower flatweed). In general best control of winter growing perennials is obtained with application during winter/spring. Best control of summer growing perennials is obtained with application late summer and autumn. For Nutgrass in cultivated situations apply sequential treatments when Nutgrass has a minimum of 6-8 leaves. Use the higher rate in uncultivated situations. For Rhodes grass and Rope twitch, use the higher boom rate only. For Bracken add Pulse at 200mL/100L spray mix. Best control of couch in WA and SA is obtained with spring treatment. Most effective control of couch in eastern states is obtained with summer and autumn treatments. In cultivated situations use sequential treatments of 2-4.5L/ha for control.
Blady grass[AB] Bracken Couch *Cumbungi *Glyceria[EF] Guinea grass *Paragrass *See Dry Drains and Channel Use situation	7 g/litre	4.5 kg	

PERENNIAL WEEDS Registration in all states/territories unless otherwise specified.

WEEDS CONTROLLED	HANDGUN/KNAPSACK	CRITICAL COMMENTS
Bamboo Bitou bush[ABCD] Boxthorn Gorse Groundsel bush[AB] Lantana[AB]	5 g/litre	For Gorse, add Pulse at 20mL/10L of spray mix.
Blackberry Eucalyptus spp. (seedlings <2m)[ABCDF] Hawthorn[BCDE] Pampas grass Sifton bush[AB] Willow (<2m)[ABCDF]	5-7 g/litre	For Eucalyptus spp., add Pulse at 20mL/10L of spray mix.

CONSERVATION TILLAGE
RESTRAINTS: To ensure herbicide absorption, DO NOT disturb weeds by cultivation, sowing or grazing for 1 day after treatment of annual weeds and 7 days for perennial weeds, except where noted.

SITUATION	WEEDS CONTROLLED	RATE/HA	CRITICAL COMMENTS
SOUTHERN AUSTRALIA Prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement WA, SA, Vic and NSW only	Barley grass, Brome grass, Wild oats, Volunteer cereals	**265-530g** pretillering **530-660g** posttillering	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred, allow re-growth to 6-8 cm before spraying and use the higher rate. **Rate Selection** Increase to higher rates late in season or when treating under cold/overcast conditions. Full disturbance with cultivation or sowing with a tyned implement may start one day after treatment (7 days if Dock, Phalaris, Skeleton weed, Soursob or Sorrel are present) and should occur within 21 days after treatment. Where cultivation or sowing does not occur within 21 days, new weed growth may require further treatment. When treating light infestations of seedling annual grasses (pre-tillering) and annual broadleaved weeds (less than 8cm dia/height), cultivation or sowing may start 6 hours after treatment and should occur within 21 days. **Crop Establishment** Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment for directions. Annual Ryegrass, Silver grass and perennial grasses Addition of Wetter TX®, 200mL/100L spray solution, may improve control. When treating dense infestation of Silvergrass, use low volume nozzles (eg. SS11001, Hardi. No.10) and a spray volume of 70mL/ha or more is recommended to improve plant spray coverage. **Tank Mixtures** For improved control of clover add dicamba. Read and follow all label directions, restraints, plantback periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See **Tank Mixtures** for directions. **Perennial Weeds** For Perennial phalaris, soursob, skeleton weed and Sorrel, GLYPHOSATE 680 TUFFWEED will provide knockdown, seasonal suppression and reduction in treated plant numbers.
	Annual phalaris (Canary grass), Annual ryegrass, Silvergrass, Winter grass	**530-660g** pretillering **660-790g** posttillering	
	Calomba daisy, Capeweed, Doublegee/Spiny emex	**265-530g** less than 8cm diam/height **530-790g** greater than 8cm diam/height	
	Amsinckia, Fumitory, Paterson's curse, Saffron thistle, Scotch thistle, Spear thistle, Variegated thistle, Volunteer lupins, Wild turnip	**530-660g** less than 12cm diam/height **660-790g** greater than 12cm diam/height	
	Dock (seedling)	**530-790g**	
	Perennial phalaris, Sorrel, Sub clover, Soursob Skeleton weed-fully emerged rosettes NSW only	**790g**	
	All the above weeds TAS only	**790g -1.6kg**	**Tasmania** Use 790g/ha on annual weeds. Increase to 1.6kg/ha where perennial weeds are being treated. To control White Clover and improve control of Sorrel and Dock, add 1L/ha Banvel. Observe label directions and plantback periods.
SOUTHERN AUSTRALIA Prior to establishing a crop or pasture with an implement that gives minimal or no soil disturbance. NSW, Vic, SA, WA only	Barley grass, Wild oats, Volunteer cereals	**530 g – 790 g**	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred, allow regrowth to 6-8cm before spraying and use the higher rate. **Rate Selection** Use the **lower rate** on young weeds; increase to the **higher rate** where grasses reach full tillering or where broadleaf weeds commence stem elongation/budding. Increase to higher rates in spring and under cold conditions. **Aerial application** Use higher rates. See **Aerial Equipment**. **Annual Ryegrass, Silvergrass and perennial grasses** Addition of Wetter TX, 200mL/100L spray solution, may improve control. When treating dense infestation of Silvergrass, use low volume nozzles (eg.SS11001, Hardi. No.10) and a spray volume of 70mL/ha or more is recommended to improve plant spray coverage. **Tank Mixtures** For improved control of clover add dicamba. Read and follow all label directions, restraints, plantback periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See **Tank Mixtures** for directions. Addition of ammonium sulfate, 2kg/100L, may improve control when treating under adverse environmental conditions. **Pasture or Crop Establishment** Do not sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. Grazing may commence one day after treatment of annual weeds (small) and 7 days for perennial weeds. Delay grazing for three days where annual weeds are large. Sowing may proceed when excessive trash is removed, but not sooner than one day after treatment of annual weeds and 7 days for perennial weeds. See also **Crop Establishment**. **Aerial (or surface) Seeding** Delay seeding until trash level is completely removed by grazing and/or plant decay. When establishing pasture, ensure application of fertilizer and insecticides and follow up management is undertaken as required.
	Brome grass, Canary grass, Capeweed, Variegated thistle, Winter grass	**660 g – 1 kg**	
	Annual ryegrass, Paterson's curse, Saffron thistle, Scotch thistle, Spear thistle, Silvergrass, Wild mustard, Wild radish, Wild turnip	**790 g – 1 kg**	
	Erodium, Plantain, Perennial-Phalaris, Sorrel, Sub. Clover, Yorkshire fog	**990 g – 1.3 kg**	
	Dock, Flatweed	**1.3 kg**	
	All the above weeds TAS only	**790g – 1.6kg**	**Tasmania** Use 790g/ha on annual weeds. Increase to 1.6kg/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 1L/ha dicamba. Observe label directions and plantback periods.
SOUTHERN AUSTRALIA To commence a fallow NSW, Vic, SA, WA only	Barley grass, Volunteer cereals, Wild oats	**530 g – 790 g**	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred, allow regrowth to 6-8cm before spraying and use the higher rate. **Rate Selection** Use the lower rate on young weeds or where cultivation is to follow within 21 days. Increase to the high rate where grasses reach full tillering or where broadleaf weeds commence stem elongation/budding. **Annual Ryegrass, Silvergrass and perennial grasses** Addition of Wetter TX®, 200mL/100L spray solution, may improve control. When treating dense infestation of Silvergrass, use low volume nozzles (eg. SS11001, Hardi No.10) and a spray volume of 70L/ha or more is recommended to improve plant spray coverage. **Hoary cress** Treat from late rosette to early flowering. **Soursob** Treat at tuber exhaustion. **Couch** Use the higher rate on dense infestations. Apply sequential treatments during summer and autumn, with autumn being most effective. Repeat applications will be required for full control. For improved control, use in conjunction with cultivation. **Tank Mixtures** For improved control of clover add dicamba. Read and follow all label directions, restraints, plantback periods,withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions.
	Annual ryegrass, Brome grass, Capeweed, Paterson's curse, Saffron thistle, Scotch thistle, Silvergrass, Spear thistle, Wild mustard, Wild radish, Wild turnip	**790 g -1 kg**	
	Hoary cress, Soursob	**790 g**	
	Couch	**790 g- 1.6 kg**	
	All the above weeds TAS only	**790 g – 1.6 kg**	**Tasmania** Use 790g/ha on annual weeds. Increase to 1.6kg/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 1L/ha dicamba. Observe label directions and plantback periods.
Pasture topping For annual grass, capeweed and Calomba daisy seed-set reduction	Barley grass, Brome grass, Capeweed, silvergrass	**160 g-240 g**	Remove stock prior to treatment to allow even regrowth. Apply to capeweed and Annual Ryegrass at FLOWERING. For other grass, apply from HEAD to MILKY DOUGH stage. Use higher rate for dense infestations or where Annual ryegrass is present. Apply before signs of plants "haying off". Reduction in pasture legume population may occur as a result of treatment. DO NOT apply to clover or medic crops intended for seed or hay.
	Annual ryegrass, Calomba daisy	**240 g**	
Seed-head suppression of Perennial grasses	Bentgrass	**200 g-330 g**	**Timing** Treat from late October to late November. Apply before seedheads have emerged. Use the higher rate where growth is excessive and renovation is intended the following autumn. **Follow up management** Graze hard after spraying.
Poa Tussock infested pasture For reduction of ground cover allowing pasture renovation	Most annual weeds and suppression of Poa Tussock	**1.6 kg-2.1 kg**	**Timing** Graze heavily, then remove at least 14 days before spraying to allow fresh regrowth. Apply to actively growing plants after the autumn break but before heavy frosts (March – May). **Application** Increase to the higher rate may give more effective reductions. If aerial spraying, see **Aerial Equipment Follow up management**. Sowing may start from 14 days after spraying. It is essential that correct follow up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestation.
NORTHERN AUSTRALIA In fallow or prior to planting a crop. Qld, NSW only	Annual phalaris (Canary grass), Barley grass, Volunteer cereals, Wild oats	**265-530g**	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred, allow regrowth to 6-8cm before spraying and use the higher rate. Note that under summer (hot) conditions, dense infestations of Barnyard grass and Liverseed grass may require follow up treatment for complete control. Enhanced control of Barnyard grass and Liverseed grass may require follow up treatment for complete control. In winter (cold) conditions symptoms on Deadnettle may be slow to develop. **Rate Selection**: Use the lower rates on young weeds; increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. At more advanced stages of growth certain broadleaf weeds require a higher rate range. **Crop Establishment**: Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See **Crop Establishment** for directions. **Tank Mixtures**: Read and follow all label directions, restraints plant-back and withholding periods, regional use restrictions and safety directions for the tank mix products. DO NOT tank mix with atrazine when spraying Barnyard grass or Liverseed grass. **Aerial Application**: For instructions on aerial application under hot conditions see **Aerial Equipment**. DO NOT apply by aircraft when ambient temperature is above 30°C.
	Barnyard grass, Button grass, Columbus grass (seedling), Liverseed grass, Native millet, Stinkgrass (lovegrass), Volunteer sorghum	**530-1kg**	
	Australian bluebell (Qld only), Cudweed, Fumitory, Mexican poppy, New Zealand Spinach, Saffron thistle, Spear thistle, Spurge, Stinking goosefoot	**530-790g**	
	Black (giant) pigweed, Boggabri weed, Caltrop (yellow vine), Indian hedge mustard, Mintweed, Summer grass	**265-530g** up to 5 true leaves or 3cm dia/height **530-790g** greater than 5 true leaves or 3cm dia/height	
	African Turnip weed, Deadnettle, Sweet summer grass, Variegated thistle, Volunteer sunflower	**400-530g** up to 5 true leaves or 3cm dia/height **530-1kg** greater than 5 true leaves or 3cm dia/height	
	Annual ground cherry (gooseberry), Bladder ketmia, Camel melon, False castor oil plant (Thornapple), Noogoora burr, Turnip weed, Wild lettuce, Wild turnip, Wireweed	**530-790g** prior to stem elongation/budding. After that use **265-790g** plus **500-700mL** Ken- Ester 800 or **790g-1kg**.	
	Pigweed	**530 g – 1kg**	Use higher rates on larger weeds. Control of pigweed over a wide range of growth stage can be obtained with the addition of Metsulfuron (Ken-Met 600). Observe recropping intervals.
NORTHERN AUSTRALIA In fallow or prior to planting a crop. Qld, NSW only	Sowthistle, Milkthistle	**400-530g** rosettes up to 3cm dia. **530g** – 1kg greater than 3cm dia.	Previously grazed plants may be difficult to control without allowing full recovery.
	Couch	**790g -1.6kg**	Use the higher rate for dense infestations. Apply sequential treatments during summer and autumn, with autumn being most effective. Repeat applications will be required for full control. For improved control use in conjunction with cultivation.
	Johnson grass	**1 – 1.6kg**	Use the higher rate on plants approaching seedhead stage. Apply to plants with minimum of 30cm new growth. Sequential treatments will be required for long term control.
	Nutgrass	**1.6 + 1.6kg**	Make first application to actively growing plants when at least 20% have reached the head stage (normally about Feb). After allowing maximum re-emergence to occur (normally 6-8 weeks), it is essential to make a second application. Note Follow up treatments should be made as part of a Nutgrass control program.
SORGHUM CONTROL (pre-harvest) QLD, NSW only	Sorghum (grainsorghum) DO NOT apply to varieties intended for seed production or varieties prone to lodging	**790-1kg**	Apply when grain moisture is less than 25%. Pre-harvest treatments may increase the likelihood of crop lodging. Apply treatments to previously slashed/grazed stubble when at least 20cm of new growth has occurred. Caution Sorghum may be naturally toxic to stock.
SORGHUM CONTROL (post-harvest) QLD, NSW only	Sorghum stubble (grain-sorghum)	**530-790g for fresh regrowth from slashed stubble. 790-1kg for standing stubble if sufficiently green and for fresh spring regrowth.**	
SUGARCANE Ratoon Spray out Qld, NSW only	Sugarcane ratoon regrowth	**2.1 – 4.8kg**	APPLY UNDER GOOD GROWING CONDITIONS ONLY to actively growing rations 60-120cm tall. DO NOT apply if plants are under stress from low moisture or waterlogging. Use the lower rate for suppression or where cultivation is to follow. Use the higher rate for control.
RICE Direct drilling NSW only	Annual phalaris (Canary grass), Annual ryegrass, Barley grass, Burr medic, Sub. Clover, Winter grass	**530 g- 660g**	GLYPHOSATE 680 TUFFWEED is less effective in droughtstressed plants. In drought conditions a prewatering prior to spraying is recommended. In grazed situations, if heavy grazing has occurred allow regrowth to 6-8cm before spraying. Annual ryegrass Add Wetter TX® at 200mL/100L of spray solution and where dominant, use the higher rate. Sowing Direct drilling may take place 1-14 days after spraying. GLYPHOSATE 680 TUFFWEED does not provide residual weed control. Permanent water and approved selective herbicides should be used to provide continuing control of weeds.
Cotton (preharvest) Do not use on crops intended for seed production QLD, NSW only	Bathurst burr, Noogoora burr, Winter annual weeds including sowthistle/milkthistle	**660 g – 1.3 kg**	Use the lower rate on light infestations of small weeds, where the crop canopy allows adequate spray coverage of the weeds. Increase to the higher rate when the crop canopy may limit spray coverage, when treating dense infestations, or when treating larger weeds. Apply alone or in tank mixtures with Thidiazuron or Harvade®. Apply when at least 60% of bolls are open and immature bolls cannot be easily cut with a knife. When a leafy canopy limits spray coverage, reduced weed control can be expected. For best results under these conditions, delay application until canopy re-opens following initial conditioning treatment. Where control of Nutgrass and Noogoora burr is required, treatments should be applied prior to the onset of frosts. When tank mixed with defoliants, a slightly higher proportion of cotton leaf may be retained, particularly where the higher rate is used. Read and follow all label directions for the tank mix products.
	Nutgrass, seasonal suppression only	**1.3 kg**	

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WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED